generally negative perception of RO. The Belgian Radiation Oncology Awareness Organisation (BRAVO) is a collaborative platform of medical practitioners and industrial partners, created to evaluate and where required increase knowledge concerning radiation oncology by the general population, healthcare workers and policy makers. As a first step it was decided to assess the awareness of the general population.
Materials and Methods: Between March and June 2014, data for this survey was collected during face-to-face streets interviews in all Belgian provinces. Questionnaires included fourteen questions articulated around four major themes: general awareness, efficacy, security and comfort, and innovation. Where required, open questions were used to avoid inducing answers. For most questions more then one answer was registered, and in that case the order of answers was noted.
Results: Participants (n=746) were well balanced for gender and geographical distribution was homogeneous. Age distribution showed that a majority of participants was younger than 40 years (57%). We report here on a subset of questions.
When looking at different therapeutic modalities for cancer, 59 % of participants spontaneously cited RO as an option. However, when asked about the modality that offers the best cure chances, the RO score was well below surgery and chemotherapy with 13, 40 and 26% of positive answers respectively. Knowledge on treatment of cancer is mainly based on experiences in the personal environment (56%) and TV (37%), followed by written press (24%); the internet, school and hospitals being cited as other sources of information.
On the safety issue, 33.8% of responders considered RO as an 'unsafe' technique compared to 28.1% for whom it was 'safe'. RO was perceived as safe as chemotherapy, but less safe than surgery. Discussing potential side effects, participants seemed confused and cited problems induced by chemotherapy: 'hair loss' was more frequently mentioned (21%) than 'skin burns' (12%), with 36% having no idea about any radiotherapy toxicity.
Lastly, asked about the treatment modality considered most innovative, radiotherapy came first (35%) before chemotherapy (31%) and surgery (16%).
Conclusions: Knowledge of RO in Belgian general population is relatively poor and confusion with other treatment modalities exists. RT is not readily recognized as an effective treatment option and seems associated with insecurity. There is a clear need for future educational efforts targeted to the general population.

OC-0288

Intensity of pain, depression and anxiety affect outcome of radiation treatment in head and neck cancer patients

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Purpose/Objective: Prospective evaluation of psychological variables including cut-off scores of psychological tests in aspect of outcome in head and neck cancer (HNC) patients treated by radiation alone, concurrent and sequential chemo-radiation.
Materials and Methods: Eighty patients (women - 28%, men - 72%, stage I/II - 17%, III - 15%, IV - 68%) were treated with by Accelerated Radiotherapy Alone (ARA - 60%) or Concurrent Chemo-Radiation (CCR - 40%) in some cases preceded by induction chemotherapy. The patients completed modified Hospital Anxiety and Depression Scale (HADS-M with additional aggression-irritability subscale), Distress Thermometer, Satisfaction with Life Scale, Visual-Analog Scales (VAS) of pain in HN area before (80 pts) and after (71 pts) therapy. Clinical data, psychosocial and marital status of patients were included into the analysis as well.
Results: Local control (LC) and overall survival (OS) rates at 3 year follow-up were respectively 62% and 63%. At baseline, 30% of patients were clinically depressed (15/42 or more points of general HADS score including depression and anxiety subscales). Overall HADS score was correlated with rates of 3-year OS and LC, i.e. in patients with HADS <10p there were 77% of LC and 73% of OS, but in HADS ≥10p there were 47% of LC and 54% of OS ($p<0.021$ and $p<0.045$, respectively). Fifty seven percent of patients reported baseline pain in HN area measured by VAS (42.5% - no pain, 27.5% - weak pain 1-3p, 27.5% - moderate pain 4-6p, 2.5% - intense pain 7-10p). VAS score was correlated with rates of 3-year OS and LC, i.e. patients with moderate and intense pain of HN area (4-10p) had significantly lower LC and OS rates compare to patients with less pain (0-3p) – 29% and 32% versus 75% and 78%, respectively ($p<0.00131$, $p<0.00033$). Both HADS score and baseline VAS HN pain were not correlated with T and N stage, site of disease, age and sex. Baseline HADS score and HN pain intensity at baseline weakly correlated each other ($R=0.24$, $p<0.05$). Compared to the patients who had only CCR or ARA, induction chemotherapy group had 50% lower depression score after completing radiotherapy ($p<0.05$). Baseline C-Reactive Protein level was related to increased depression and general higher HADS scores ($R=0.31$, $p<0.05$). Living alone without partner or family correlated with baseline HN pain ($R=0.37$, $p<0.05$) and stage of cancer ($R=0.27$, $p<0.05$).
Conclusions: Baseline subclinical depressive symptomatology and elevated HN pain seem to play a significant role in the effectiveness of HNC radiation-related treatment, additionally to the other, well-known prognostic factors.

Symposium: Databases and data-mining: The issue of the quality of data

SP-0289

Ontology: A new perspective in data-coding

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Ontologies can be used to increase data quality by describing the variables that are recorded in databases and the relationship between them. The definition of an ontology is "a formal description of the entities and the relationships between them for a given domain". In radiation oncology, entities are classes like patients, diseases, CT-scans, radiotherapy treatments etc. and individuals like a specific MR scan or a specific treatment in a specific patient. Relationships can be simple such as specifying entities being sub classes, types, domains, ranges etc. of one another and data properties (e.g. dates) to more complex relationships such as a specific toxicity that occurred in a specific patient due to a specific radiotherapy treatment.